THE FOURTH INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN APPLIED DYNAMICAL SYSTEMS

June 16---20, 2010,

Zhejiang Normal University

Jinhua, Zhejiang, China

PROGRAMS

Center for Dynamical Systems and Nonlinear Sciences, ZJNU

College of Mathematics, Physics and Information Engineering, ZJNU

Organizers:

Zhejiang Normal University
Guangzhou University
Shanghai Normal University

Financial support:

National Natural Science Foundation of China
National Science Foundation of United States
Zhejiang Innovation Project
Zhejiang Normal University

Scientific Committee:

<u>Co-Chairs</u>: Shui-Nee Chow (Georgia Institute of Technology, USA)
                Peter Bates (Michigan State University, USA)

<u>Members:</u>
Guanrong Chen (City University of Hong Kong, Hong Kong, China)
L.O. Chua (University of California at Berkeley, USA)
Bolin Guo (Institute of Applied Physics and Computational Mathematics, China)
Zhujun Jing (Chinese Academy of Sciences, China)
Chengzhi Li (Peking University, China)
Jaume Llibre (Universitat Autònoma de Barcelona, Spain)
Zhien Ma (Xi'an Jiaotong University, China)
Hans-Otto Walther (Universität Giessen, Germany)
Yuefei Wang (Chinese Academy of Sciences, China)
Lan Wen (Peking University, China)

Organizing Committee:

<u>Honored Chair</u>: Fengmin Wu (President, Zhejiang Normal University, China)
<u>Chair</u>:   Jibin Li (Zhejiang Normal University and KUST, China)
<u>Co-Chairs</u>:   Jianshe Yu (Guangzhou University, China)
              Maoan Han (Shanghai Normal University, China)
<u>Members:</u>
Kening Lu (Brigham Young University, USA)
Junping Shi (College of William and Mary, USA)
Todd Young (Ohio University, USA)
Xiaohua Zhao (Zhejiang Normal University, China)
Zhangxin Wu (Zhejiang Normal University, China)
Yi Zhang (Zhejiang Normal University, China)
Xuejuan Zhang (Zhejiang Normal University, China)
Yonghui Xia (Zhejiang Normal University, China)
Fengjuan Chen (Zhejiang Normal University, China)

Conference Venue:

- On June 17, the first day, opening ceremony and two parallel sessions will be held in Zhejiang Normal University campus.
- On June 18—19, Conference will be held in Jinhuayuan Vacation Village (锦华园度假村).

Meals:
- For all days except June 17, meals will be in buffet form at dinning hall of Jinhuayuan Vacation Village on the first floor.
- Breakfast time: 7:00; Lunch time: 12:20; Supper time: 18:10.

Conference Secretary Room: (会务组)

Jinhuayuan Vacation Village (锦华园度假村)　Room 6206 (2nd floor).

Wednesday, June 16

Registration Day (Jinhuayuan Vacation Village)

Thursday, June 17

Buses to Zhejiang Normal University will leave hotel at 7:50

Thursday, June 17

Opening Ceremony (Lecture Hall on 1st floor at College of MPIE, ZJNU)

Time	Chairman	Speaker
8:15-9:00	Jibin Li	Chairman of Scientific Committee Chairman of Organizing Committee President of the University, ZJNU Dean of College of MPIE, ZJNU
	Jibin Li	Group Photo

Thursday, June 17

Parallel Session I (Lecture Hall on 1st floor at College of MPIE, ZJNU)

No	Time	Chairman	Speaker	Title
1	9:00-9:35	Wenxian Shen	Weiqiu Zhu	Stochastic averaging method for quasi Hamiltonian systems and its Applications
2	9:35-10:10		Xiao-Biao Lin	Spherically Symmetric Standing Waves for a Liquid/vapor Phase Transition Model
	10:10-10:30 Tea Break			
3	10:30-11:05	Xiao-Biao Lin	Wenxian Shen	Spreading Speeds for Monostable Equations with Nonlocal Dispersal in Space Periodic Habitats
4	11:05-11:40		Xiaoqiang Zhao	Bistable Waves for Monotone Semiflows With Applications
5	11:40-12:15		Jinqiao Duan	What is the Impact of Noise on Invariant Manifolds
	12:20-13:30 Lunch			
6	14:00--14:35	Jinqiao Duan	Kunimochi Sakamoto	Stability and Bifurcation of Rotating Waves in nonlinear equations of Schrodinger type
7	14:35--15:10		Wenzhang Huang	Problem on Minimum Wave Speed of Traveling Waves for a Lotka-Volterra Competition Model
8	15:10-15:45		Rongsong Liu	Spatiotemporal variation of mistletoes: a dynamic modeling approach
9	15:45-16:20		Yun-Qiu Shen	Rank Deficiencies and Bifurcation into Affine Subspaces for Separabl Parameterized Equations
	16:20-16:40 Tea Break			
10	16:40-17:15	Zhaosheng Feng	Wenxin Qin	Monotonicity and Sliding States in the overdamped particle chains
11	17:15-17:50		Tianshou Zhou	Dynamics of Biological network modules
12	17:50-18:25		Shenquan Liu	Modeling and Application of Olfactory Bulb

Welcome Reception 18:30 at Academic Exchange Center of ZJNU

Thursday, June 17

Parallel Session II (Room 202 on 2nd floor at College of MPIE, ZJNU)

No	Time	Chairman	Speaker	Title
1	9:00-9:35	Maoan Han	Jianshe Yu	The uniqueness problem of periodic solutions for the equation \dot{x(t)}=-f(x(t-1))
2	9:35-10:10		Weishi Liu	Critical structures of singularly perturbed problems of different types
10:10-10:30 Tea Break				
3	10:30-11:05	Jianshe Yu	Maoan Han	On Hopf bifurcations of piecewise planar Hamiltonian systems
4	11:05-11:40		Dongmei Xiao	On the number of limit cycles in small perturbations of hyper-elliptic Hamiltonian systems
5	11:40-12:15		Yulin Zhao	Recent advances in the weakened Hilbert 16th problem for quadratic systems Q^R3 and Q4
12:20-13:30 Lunch				
6	14:00--14:35	Dongmei Xiao	Dingbian Qian	Periodic and Quasi-periodic Dynamics of Bose-Einstein Condensates
7	14:35--15:10		Zhan Zhou	On the existence of homoclinic solutions of a class of discrete nonlinear periodic systems
8	15:10-15:45		Shenfan Zhou	Exponential Attractor for KGS Lattice System
9	15:45-16:20		Jingsong He	Explicit Flow Equations and Recursion Operator of the ncKP hierarch
16:20-16:40 Tea Break				
10	16:40-17:15	Xiaoqiang Zhao	Qiru Wang	Traveling wave solutions in delayed nonlocal diffusion systems with mixed monotonicity
11	17:15-17:50		Peixuan Weng	Asymptotic speed of propagation and traveling wavefronts for a SIR epidemic model
12	17:50-18:25		Zhi-An Wang	Traveling Waves in Chemotaxis

Welcome Reception 18:30 at Academic Exchange Center of ZJNU

Friday, June 18

Parallel Session I (No.7 Lecture hall on 1st floor at Jinhua Yuan V. Village)

No	Time	Chairman	Speaker	Title
1	8:00-8:35	Weishi Liu	Yasumasa Nishiura	Deformation and rotational motion of traveling spots
2	8:35-9:10		Huaiping Zhu	Limit cycles in a quadratic system with nilpotent graphics
3	9:10-9:45		Xingfu Zou	Map dynamics versus dynamics of associated delay R-D equation with Neumann condition
4	9:45-10:20		Fengxin Chen	Structure of Principal Eigenvectors and Genetic Diversity
	10:20-10:35 Tea Break			
5	10:35-11:10	Xingfu Zou	Yuming Chen	Threshold dynamics of delayed reaction-diffusion equations in unbounded domains
6	11:10-11:45		Lin Wang	Threshold Dynamics in Disease Models with Latency and Relapse
7	11:45-12:20		Fang Wang	Mather Theory for The Flow of Geodesics on Surfaces
	12:20-13:30 Lunch			
8	14:00--14:35	Chunhua Ou	Shui-Nee Chow	Fokker-Planck Equations for a Free Energy Functional or Markov Process on a graph, part I
9	14:35--15:10		Wen Huang	Fokker-Planck Equations for a Free Energy Functional or Markov Process on a graph, Part II
10	15:10-15:45		Xing Liang	Rearrangement Inequalities for Principal Eigenvalues of Integral Operators and Applications
	15:45-16:25 Tea Break, Poster Session I			
11	16:25-17:00	Wenzhang Huang	Zhaosheng Feng	Duffing-van der Pol Oscillator and Applications to Degenerate Reaction-Diffusion Systems
12	17:00-17:35		Chunhua Ou	Population Dynamics with Age-dependent Diffusion and Death Rates
13	17:35-18:10		Zhen Jin	Modeling and analysis of influenza A(H1N1) on networks
	18:10-19:00 Dinner			

Poster session I: Michael Essman, Ben Holman, Hongying Shu, Ruoyan Sun, Lijuan Zhang

Friday, June 18

Parallel Session II (No.9 Lecture hall on 1st floor at Jinhua Yuan V.Village)

No	Time	Chairman	Speaker	Title
1	8:00-8:35	Peter W. Bates	Tomas Gedeon	Multi-Valued Characteristics, Morse Decompositions and Periodic Orbits
2	8:35-9:10		Yuming Shi	Chaos in non-autonomous discrete dynamical systems
3	9:10-9:45		Qingjie Cao	Nonlinear Dynamics of an Archetype Rig-Coupled SD Oscillator
4	9:45-10:20		Jun Jiang	Determination and Prediction of the Global Responses Characteristics of A Piecewise Nonlinear Dynamical System
	10:20-10:35 Tea Break			
5	10:35-11:10	Huaiping Zhu	Chunhai Kou	Practical Stability Analysis of Linear Impulsive Hybrid Systems involving Fractional Derivatives
6	11:10-11:45		Meng Fan	Exponential Dichotomies of Linear Dynamic Equations
7	11:45-12:20		Binxiang Dai	Multiple solutions for a class of impulsive differential equations with Dirichlet boundary conditions via critical point theory
	12:20-13:30 Lunch			
8	14:00--14:35	Jifa Jiang	Weihua Jiang	Hopf-pitchfork bifurcation in van der Pol's oscillator with nonlinear delayed feedback
9	14:35--15:10		Jianhua Shen	Periodic Solutions to Impulsive Duffing Equations via Poincare-Birkhoff Fixed Point Theorem
10	15:10-15:45		Zengji Du	Existence and Global Attractivity of Positive Periodic Solution
	15:45-16:25 Tea Break, Poster Session I			
11	16:25-17:00	Yuming Shi	Lijun Pei	Effects of technological delay on insulin and blood glucose in a physiological model
12	17:00-17:35		Xiaoyan Liu	The applications of orthonormal splines in solving integral equations
13	17:35-18:10		Yongli Song	Fold, Hopf and fold-Hopf bifurcations in delay differential equations with application to a damped harmonic oscillator with delayed feedback
	18:10-19:00 Dinner			

Poster session II: Manjun Ma,   Chuncheng Wang,

Chifeng Yooer,   Xu Zhang

Saturday, June 19

Parallel Session I (No.7 Lecture hall on 1st floor at Jinhua Yuan V.Village)

No	Time	Chairman	Speaker	Title
1	8:00-8:35		Izumi Takagi	Collapse of patterns in activator-inhibitor systems
2	8:35-9:10		Junping Shi	Predator-prey model with strong Allee effect on prey population
3	9:10-9:45	Jiazhong Yang	Jifa Jiang	Reaction-Diffusion Equations for Two Species Competing for Two Complementary Resources with Internal Storage
4	9:45-10:20		Xiaosong Yang	Determining Controllability of Snakeboard by Lie algebra and differential Forms: A brief introduction to geometric control and locomotion
		10:20-10:35 Tea Break		
5	10:35-11:10		Pei Yu	Four limit cycles in quadratic near-integrable polynomial systems
6	11:10-11:45	Junping Shi	Jiazhong Yang	On the number of critical periods for planar polynomial systems of arbitrary degree
7	11:45-12:20		Qigui Yang	Complex dynamics of the chaotic system with one saddle and two stable node-foci
		12:20-13:30 Lunch		
8	14:00--14:35		Fangyue Chen	Logic Computation Based on Dynamical Systems
9	14:35--15:10	Fengxin Chen	Xuejuan Zhang	Maximum Likelihood Decoding of Neuronal Inputs from an Interspike Interval Distribution
10	15:10-15:45		Chengjun Sun	Effect of time delay on a detritus based ecosystem
		15:45-16:25 Tea Break, Poster Session II		
11	16:25-17:00		Zhifu Xie	Super Central Configurations and Geometrical Equivalence in the Newtonian n-body Problem
12	17:00-17:35	Pei Yu	Xiaohua Zhao	Periodic orbits and non-integrability for a class of four-dimensional Lotka-Volterra systems

Parallel Session I –II (No.7 Lecture hall on 1st floor at Jinhua Yuan V.Village)

13	17:35-18:10		Peter W. Bates	Kinesin-Microtubule Interactions Transport and Spindle Formation
	18:10-18:15	Shui-Nee Chow		Closing
		18:15-19:00 Dinner		

Sunday, June 20

8:00   Buses will leave hotel for trip to Double-Dragon Cave (双龙洞)

Saturday, June 19

Parallel Session II (No.9 Lecture hall on 1st floor at Jinhua Yuan V.Village)

No	Time	Chairman	Speaker	Title
1	8:00-8:35	Yun-Qiu Shen	Xuezhong He	A Model of Financial Market with Delay
2	8:35-9:10		Zhijun Qiao	Integrable peakon and cuspon equations
3	9:10-9:45		Jianhua Huang	Dynamics of Non-newtonian partial differential equations driven by fractional Brownian motions
4	9:45-10:20		Duo Wang	Nontrivial periodic solutions for second-order non-autonomous delay differential equations
	10:20-10:35 Tea Break			
5	10:35-11:10	Peixuan Weng	Hongjun Cao	Cooperative behaviors of bursts in map-based neuron networks
6	11:10-11:45		Haibo Chen	Infinitely many homoclinic solutions for a class of subquadratic second-order Hamiltonian systems
7	11:45-12:20		Changpin Li	Several problems in Fractional Ordinary Differential Equations
	12:20-13:30 Lunch			
8	14:00--14:35	Xuezhong He	Xinchu Fu	On Global Attractors for Some Singular Nonhyperbolic Systems
9	14:35--15:10		Yiping Lin	Dynamical behavior of a three species food chain system with time delayed harvesting
10	15:10-15:45		Yonghui Xia	On the Generalized Hartman-Grobman Problem on Time Scale
	15:45-16:25 Tea Break, Poster Session II			
11	16:25-17:00	Xinchu Fu	Ruiqi Wang	A Model for the mammalian circadian clock with microRNA
12	17:00-17:35		Hongying Shu	Impact of Intracellular Delays and Target-Cell Dynamics on in vivo Viral Infections

Parallel Session I –II (No.1 Lecture hall on 1st floor at Jinhua Yuan V.Village)

13	17:35-18:10	Shui-Nee Chow	Peter W. Bates	Kinesin-Microtubule Interactions Transport and Spindle Formation
	18:10-18:15			Closing
	18:15-19:00 Dinner			

Sunday, June 20

8:00   Buses will leave hotel for trip to Double-Dragon Cave (双龙洞)

浙江师范大学
校园平面示意图

Academic Exchange Center
国际学术交流中心

MPIE 数理信息工程学院

Star Families
师大人家

金华二中　　柳湖花园

二〇〇四年九月

Jinhua Yuan Vacation Village
锦华园度假村

Zhejiang Normal University
浙江师范大学